

<110> National Public Health Institute

<120> Identification of SNPs associated with hyperlipidemia, dyslipidemia and defective carbohydrate metabolism

<130> K 1114 PCT

<160> 1

<170> PatentIn version 3.1

<210> 1

<211> 5687

<212> DNA

<213> Human

<220>

<221> variation

<222> (3966)..(3966)

<223> r = adenine (a) or guanine (g):
adenine is wild-type associated; guanine is disease-associated

<220>

<221> variation

<222> (5205)..(5205)

<223> y = cytosine (c) or thymine (t):
thymine is wild-type associated; cytosine is disease-associated

<400> 1
ttgaaaattt tccttggata gaaaaaggttt ggaggaccctt atgggttagag aatttccaaa 60
aatcttgccc cttttgtt gggattatct tattgctttg tactgtgtag ctgtttcttt 120
ctggaggcat gtctgcccag ctctttgttt ttcctgcccct ctggctgggt gtcagggtcc 180
taaggcagag cttgttaggtg gattcttccc cctttgtctc ttcttcagaa ccctgttttt 240
ttttttttta ccccttcttg ctcaggctta gttgatttgg agttgtcata gcaacatttt 300
agcaacagtg ttgttctgca ggaaggcttg atgaataaaaa tagagaatgc ttgaagagga 360
tccacttggg ctttagggtt tctaacagat tatataaaatc tggatacccc aaaacaagag 420
tcctgtcagt agaatgggc ccaaattgcca agtctagtct ttgtggtag ggatattctt 480
ccagtggtag tgggcttcag atttcctctt cctaggtttg aaaacagaaaa tgtcttgatg 540
gacaacatgt ggctgagaaa ctggaagaag catcagtgtc catgacactg tatttttga 600

ttgtggggcc aatacatggc ctttcctgat tcccatgaag ctgccatcat ggcaggtcat	660
aatagttta atgatccatt tagagatgtg ttgttggctg ggtgcggtgg ctcatgcctg	720
taatccaagc actttggag gccgaggcag gcggatcacc tgaggtcagg agttccagac	780
cagcctggcc aatatggtaa aaccccatct ctactaaaaa tacaaaaatt agctggcgt	840
ggtggtgggc acctataatc ccagctattc aggaggctga ggcaggagaa tcacttgaac	900
ccaggagatg gaggttgtaa gccgagattg tgccactgca ctccagcctg ggtgacagag	960
caagattctg tctcagaaaa aaaaaaaaaa aaaagaaga aatgtgtgt ttcggccagg	1020
tgcagtggct cacacctgta atcccagcac tttgggaggc tgccgaggtg gacagatcat	1080
gctctcagga gttcggagacc agccgggcca acatggtcaa accccgtctc tactaaaaat	1140
acaaaaattt gccaggcgtg gtgggtgtca cctgtatcc cagctactcc ggaggctgag	1200
gcaggagaat cacttgaacc tgggaggcag aggttgcagt gagctgagat cgcgccactg	1260
cactccagcc tgggtgacag agagagactc tgtctcaaaa aaaaaaaaaa aaaaaaaagtg	1320
ttgtttctgt cttccagtat aattatccac tctccaccag gagttggagt gataatggag	1380
ggatggggaa cactatttgc agccttgctt tttcaatcac tgttaggcccag tcctcaacat	1440
cagttatggg gaggctgatt gtccctgca gatgactggg ttattttccct ggctatgtgt	1500
tcatggaaacc taagttcttag aaccagagat actgtttctgt ttcctaaact cattgcaaacc	1560
ttcatgattt ctaccaggac tttagcactca ggcctgtgaa tcaggagata caaagacctc	1620
aaaaaaaaaggc ccagttccctc ggatgtgccc cctcacagag agatgaaggg gtgagtgaag	1680
aagaggttagg gtctggatg aaagatgggt ggcctggaaag aatgcaaaat gaccaagagc	1740
actgcctctg gagtcaggca gacctggatt caggttctac tctatcacctt actgtgtgat	1800
ttgggttctc tatctataaa atggaagtag tgctatctat ctcgtggtgc tgtttttagt	1860
actaaataag attacatgtt atgtacttag ctttagtgc ttatgtatcg taaacagtaa	1920
acactagttt ttattctaac ctaacccagc ttctgttggg aatgccaatg agtttgcagc	1980
catatgttac tggccagtg agcttctcat tgacttcttc tcataactctt cctttgtcc	2040
tttcaccaca aacaggcagc agaaaacacgc tgaaaacggaa gagggggacag tgcaagttca	2100
ggaagggtgag tgctagaaac agaaccaggaa ctaagaaccc atcatggcct cccttccttc	2160
cccaccagac catctcctgt gcatccctc cttccgtga catgcaaatg gaacgggggt	2220
agaaaaggcag ttaactcaca gacttttccct ttgttctttt aattcaggtg cagttggctac	2280
tggggaaagac ccaaccaggc tggctattgc cagcatccag tcagctgcca ccttcctgaa	2340
cccccaacgtc aagtacgtct tccgaactga gaatggggc caggtaaagg agggggccag	2400
gtggctgca gttttatctg ggggtggat tgagggaggt aattgaacat gtcttgggaa	2460
gacctggctt ggaggatgag ttgaaagagt ggactgttgc aggggaggaa ggtgctaata	2520
ctggagtaga gactgggtgtg aggttagatg tatgctgaaa cctctgtgtg gggaaagaag	2580
ggagaatggc tgaatccatg tctctgaagg actttgtttt gggccctat ccaaggaaag	2640
ctttatgagg ggcccttagga ttcccaacac ttaatctttt cttctctctt cactccctct	2700

gccttcctct acacttctag gtgatgtaca gggtgatcca ggtgtctgag gggcagctgg 2760
atggccaaac tgagggact ggcgccatca gtggctaccc tgccactcaa tccatgaccc 2820
aggtacaggg tatgggctgg ggaggtcact agagttctga gaagtaagat gaagaaggga 2880
atcagtagga tgggggtgaa gctaggaaca gtgaggcattc taaggctgcc ttgtcccaa 2940
gcactaggct ctcctttctt ggtatgtttctt ctctctctctt ccaccctacc 3000
taccacccca acggatagaa gctgcagagt ggtgttagtgg gaagaagttt ttgactgtta 3060
ccagaatcag ttttcttgct ccccttccca ggcggtgatc cagggtgctt tcaccagtga 3120
tgatgcgtt gacacggagg ggacagctgc tgagacgcac tatacttact tccccagcac 3180
ggcagtggga gatggggcag ggggttaccac atcggggagt acagctgctg ttgttactac 3240
ccagggtctca gaggcactgc tggggcaggc gaccctccctt ggcactggtg agatattgca 3300
tgaggatgct ggctgaaagg gctagaatag gctgtgggac atgactggta ggcagtgagc 3360
cttcactcat gactcttagt gatcattaag acctggacag gcagttagtc tggggctgct 3420
cttctattag catgttctttt ttagaggagg ggaccagggtt cttcacctca gggcttggtg 3480
aggttcctac ccatgtcctg acagaaccta ccctgcacatc tcacaggtca attctttgt 3540
atgatgtcac cacaagaagt actgcaggga ggaagccagc gctcaattgc ccctaggact 3600
cacccttatt cccctgtgagt gacccttggtt tcttctcaga ttccgttaagt ggttttttt 3660
ttttttttttt ttttttgaga cagagtcttg ctctgtcacc caggctggag tgcagtggca 3720
tgatctcagc tcactgcaac ctctgcttcc agggttcaag cgtttctcat gcctcagcct 3780
cctgagtagc tggaaactaca gacatgttacc accaccctg gctaattttt gtatctttag 3840
tagagacagg gtttcaccat gttggccagg ctggtctcga actcctgacc tcaagtgtac 3900
cgccctgcctc ggcctccaa agtgctggga ttacagggtt gagacaccac acctagctac 3960
cataartggt cctaatacct gctaaatctt gtataattcc ttaaccccaa acttcaatca 4020
tgtattttgtt cttcttactc tggccaccctt gggctctgtt gtcaggaagt cagaagctcc 4080
ccggacgact cgggatgaga aacgcagggc tcagcataat gaaggttagt atgatctggg 4140
tggagctaga agctgtctgg tgtatctca gcagtgtatgt ctgaggggag gagggattag 4200
gtaattttac cctggactt gtggcgagtt ttcactgtgtt caccttgc tccactttgc 4260
cccacagtgg agcgtcgccg cggagacaag atcaacaact ggatcgtca gctctccaa 4320
ataatcccag actgctctat ggagagcacc aagtctggcc aggtcatggaa aagaccctgg 4380
tagtgggcag gatgcctgaa ttctgcctcc tggtattgtt tccagaaatg gtagagagag 4440
gggcacacat gacagtagtc ttatctctcc ctgagggttcc tggatccctg ggagatatta 4500
taccacccctc ctttagatgaa aatgagggtcc aaagtgtgaa cctacttttg gaaagcaagc 4560
tgggtatctg aaatccctgtt tctcatttttggacccctt cttgcagagt aaaggtggga 4620
ttctatccaa agcttgcgtat tatatccagg agcttcggca gagtaaccac cgcttgcctg 4680
aagaactgca gggacttgac caactgcagc tggacaatga cgtgcttcga caacagggtca 4740

gactcctacc	cccagtgcag	cccttctcag	ttctgctagc	cactgaccca	gtttgacacc	4800
ctctactttg	ttctccatgg	agaaggcttc	atcttttccc	cctcaccagt	ggatgtctga	4860
atacattcag	gggcttgaa	gtgccagctt	tactacccat	tcccttact	gcctccttcc	4920
catgtcaggt	ggaagatctt	aaaaacaaga	atctgctgct	tcgagctcag	ttgcggcacc	4980
acggattaga	ggtcgtcatc	aagaatgaca	gcaactaact	atggggattc	aggggcttg	5040
ggcccaagaa	ctgcagatag	cccaggagca	acagcctaatt	cccgtgcccc	tttccttcac	5100
tgccccactt	ctggcatggg	acagggggaa	gttcagaagg	tgtgtccttgc	aactgaggcc	5160
ctgtgatatg	gcggcctgca	gtggtgtgaa	acacacaatg	tggaygtgca	ctgacagcct	5220
tgccccaccc	caccatgcag	ccccctggcc	tttgtgccttcc	tctcgacacaa	tgcacatgtgct	5280
gtctccatgc	tggatactgg	acacactaaa	ctctgggct	tgtccctgtgc	ttgcttagag	5340
tgcccagcag	aggtttgcgt	acaggtgatg	ctctggcttgc	ccccaggact	ctggcacttc	5400
cattggttct	tcctttccct	ggagctgagg	tttagatgtg	caacctgtgg	ctcaggggag	5460
caagcttaca	caagaagtga	gggaaggatg	tttagcagtg	gctggtgc	ccc atgaagagga	5520
gattggccag	tgagaagctg	aggcctatgc	agacatctct	ggagccagag	agaacaacag	5580
gcaggggccc	acttggggcc	ttcccccttgc	tgggggtcgt	ttttttttt	tcttttctt	5640
ttttttttt	ttttttttt	tttttaagat	aaaatttttc	aaagcca		5687